

REMARKS

This application has been carefully reviewed in light of the Office Action dated June 20, 2008. Claims 1 to 6, 8 to 17 and 19 to 21 are in the application, with Claims 22 to 24 having been cancelled without prejudice or disclaimer of subject matter and without conceding the correctness of the rejections applied against them. Claims 1 and 12 are the independent claims. Reconsideration and further examination are respectfully requested.

Claims 1 to 6, 8 to 10, 12 to 17, 19 and 21 to 24 were rejected under 35 U.S.C § 103(a) over U.S. Publication No. 2002/0120634 (Min) in view of U.S. Patent No. 5,717,842 (Ambalavanar). Claims 11 and 20 were rejected under § 103(a) over Min and Ambalavanar in view of U.S. Patent No. 5,884,014 (Huttenlocher). Reconsideration and withdrawal of the rejections are respectfully requested.

The present invention generally concerns processing data in different formats. Data of a first format for respective pages is received, and data of a second format is generated from the data of the first format.

According to one aspect of the invention, a single record of page data management is generated. The single page data management record manages the data of the first and second formats in association with each other.

By virtue of this feature, it is possible to manage a single page in plural data formats (e.g., JBIG, JPEG, TIFF) with less memory consumption, because a single page data management record manages the plural data items of the various formats. Conventionally, separate records are required for each format, as shown in Applicants' Figs. 2A to 2C.

According to another aspect of the invention, the page data management record is deleted if none of a plurality of output processors refer to the page data management record.

By virtue of this feature, it is ordinarily possible to preserve the page data management record as long as at least one processor requires it, while conserving memory by deleting the record once none of the processors refer to the record.

Referring specifically to claim language, independent Claim 1 is directed to a data processing apparatus for processing data for respective pages. The apparatus includes a data reception unit for receiving data of a first format for respective pages, and a data generation unit for generating data of a second format from the data of the first format. The apparatus also includes a control unit for generating a single page data management record that manages the data of the first and second formats in association with each other. In addition, the apparatus includes a plurality of output processors, each for independently executing a respective output process for the data of the first format or the data of the second format. The control unit deletes the page data management record if none of the plurality of output processors refers to the page data management record.

Independent Claim 12 is directed to a method substantially in accordance with the apparatus of Claim 1.

The applied art is not seen to disclose or suggest the features of the present invention, and in particular is not seen to disclose or suggest at least the features of (i) generating a single page data management record that manages data of first and second formats in association with each other, and (ii) deleting the page data management record if none of a plurality of output processors refer to the page data management record.

In this regard, page 12 of the Office Action asserts that the claim language does not require that the page management unit is necessarily a single component, or specify how the data is managed. These assertions are not understood, since the claim language clearly recited that a page data management unit manages data of first and second formats in association with each other. Nevertheless, in an effort to even further emphasize the features of the invention, the claims now specify a single page data management record.

Turning to the applied art, Min is directed to a metadata abstraction interface interposed between multimedia files and applications. The metadata abstraction interface includes metadata decoders for parsing metadata of a multimedia file stored in a native format and rendering the metadata in a generic format. See Min, Abstract. More specifically, Min proposes "decoders" for converting metadata for an image file in bitmap, JPEG, or other format into a generic metadata format. See, e.g., Min, paragraphs [0043], [0087] and [0088].

Page 4 of the Office Action asserts that Min (paragraph [0014]) discloses a page data management unit for managing data of first and second formats in first and second page data in association with each other. More specifically, pages 4 and 12 of the Office Action equate Min's generic metadata with a page data management unit.

However, Min's generic metadata is not seen to correspond to the claimed page data management record, since Min's generic metadata does not manage plural data formats of the same page. In particular, Min creates an independent generic metadata for each input image file, without discerning whether the image file is simply an old page in a different format. See, e.g., Min, paragraphs [0087] and [0088] and Claim 1. Thus, in Min,

each generic metadata corresponds to exactly one file in one format, rather than plural data formats of the same page.

Min is also not seen to disclose deleting the page data management record if none of a plurality of output processors refer to the page data management record. Page 4 of the Office Action asserts that Min (paragraph [0046]) discloses deleting a page data management unit when none of a plurality of output processors refer to the page data management unit. However, the cited portions of Min simply disclose that an application can explicitly call for the abstraction interface to delete generic metadata by issuing a "terminate" command. See Min, paragraph [0046]. Thus, Min deletes generic metadata in response to an explicit termination request, rather than deleting a page data management record if none of a plurality of output processors refer to the page data management unit.

Ambalavanar and Huttenlocher have been reviewed and are not seen to remedy the above-noted deficiencies of Min.

Therefore, independent Claims 1 and 12 are believed to be in condition for allowance, and such action is respectfully requested.

The other claims in the application are each dependent from the independent claims discussed above, and are believed to be allowable over the applied references for at least the same reasons. Because each dependent claim is deemed to define an additional aspect of the invention, however, the individual consideration of each on its own merits is respectfully requested.

No other matters being raised, it is believed that the entire application is fully in condition for allowance, and such action is courteously solicited.

Applicants' undersigned attorney may be reached in our Costa Mesa,
California office at (714) 540-8700. All correspondence should continue to be directed to
our below-listed address.

Respectfully submitted,

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